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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _09 June 2009_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _20-37 and 39_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _20-37 and 39_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED REJECTION

Response to Remarks

In response to applicant's amendment regarding to 112 rejections, the examiner withdraws the previous rejection. In the remarks, the applicants state the technical characteristics of the probability distribution of the income, that is a factor from which the implicit function depends, are known to the user and need not be disclosed in detail. As such, the applicants admit that the "implicit equation" was known to one of ordinary skill in the art. Therefore, as understood by the examiner, the present invention is merely an modification of a known method of calculating interest by adding an additional amount of money L indicative of the risk of loss borne by the lender into the known equation. The amendment overcomes the 112 rejection, but provides hints for which the invention is an obvious modification of prior art.

In response to applicant's amendment regarding to 101 rejections, the examiner concludes that the amended claims still fail the tangible test, and thus fails to comply with 101 requirements.

> Applying In re Warmerdam, 33 F.3d 1354, 31 UAPQ 2d 1754 Fed. Cir. 1994), the
> examiner will determine whether there is simply a mathematical construct claimed, such
> as a disembodied data structure and method of making it. If so, the claim involves no
> more than manipulation of an abstract idea and is, therefore, nonstatutory under 35
> U.S.C 101. In Warmerdam, the abstract idea of a data structure became capable of
> producing a useful result when it was fixed in a tangible medium, which enabled its
> functionality to be realized.

Claims 20 and 39 describe solving a mathematical formula using a computer

system, which is like inputting data and calculating a number according an equation on

a calculator. In this case, only the number K and L are stored in a memory medium. It

is different from fixing an executable data structure capable of producing a useful result

in a computer medium, as in Warmerdam. In re Warmedrdam establishes that the

computer medium must contain a complete data structure or executable software to

perform all the necessary inventive steps. Claims 21-34 are dependent on claim 20 and

they do not overcome the deficiency. As such, claims 21-34 are rejected for the same

reason.

Also, the applicant cited US Patent 5,193,056 in attempt to argue that the present

claims contain patentable subject matter. The examiner points out that all the claims in

that specific patent are system claims, which have tangible structures. The present

claims rejected under 101 are all method claims, which only describe the steps of

solving a formula.

Furthermore, the examiner argues that the present claims fail to meet 101

requirement in light of *in re Bilski*. A method claim must have sufficient tie to a statutory

subject matter. In the present claims as amended, there is still no sufficient tie, because

the computer in the invention is merely used to calculate a formula. In business method

applications, it is required that a computer automates transaction, extract information

from database, or execute tasks for human other than doing simple calculation, in order

to establish sufficient tie. As discussed earlier, the present invention merely uses

computer to conduct simple combination calculation.

In response to applicant's amendment regarding to 103 rejections, the examiner concludes that the newly added features do not over the prior arts. Specifically, in claim 20, the applicant adds having the computer system determine an interest for entrustment of money as a function of K, M, and L. The applicant does not explicitly point out how the interest is calculated or which function is used in the calculation. Therefore, the claim language is interpreted as merely calculating an interest for entrustment of a certain amount of money. The applicant admits in the specification that "Various methodologies for the calculation of interest rates are known". Since the claim language does not describe a distinctive method of calculating interest, the present claims are not patentable over the admitted prior arts. The applicant also adds a step to recite determining the additional amount of money L through an implicit equation. The examiner points out that calling an equation implicit without disclosing the identity of the equation is not helpful. Under the current claim language, the equation can be any equation in the world, and it is not possible to determine whether this undefined equation or the use of such constructs an inventive step. As such, this added step does not provide any patentable weight.

In the remarks, the applicants argue that the combination of UNA and Ronald was not obvious "because it was never proposed, nor taught, nor suggested, nor accomplished". The examiner reminds the applicant that in light of the KSR rationales, combining prior art elements according to known methods to yield predictable results is sufficient to establish prima facie of obviousness. In this case, as admitted by the applicant, the method of calculating an interest for entrustment of quantities of money K

as a function of quantities of money K and additional remuneration M was prior art.

Ronald teaches lender needs to add additional financial charge, such as points, loan

fee, application fee, origination fee, and etc., to ensure profitability. These financial

charges are interpreted as additional amount of money L. Therefore, it would have

been obvious to one of ordinary skill in the art to modify the known prior art to add the

element of L to the known equation of calculating interest for the interest of ensuring

lender's profitability. The math required for the medication was well within the

knowledge of one of ordinary skill in the art, unless the applicants can prove otherwise

by filing an affidavit under 37 C.F.R 1.132.

Since claims 35 and 36 are system claims, only the structure of the system

carries patentable weight. Based on Fig 1 to Fig 3 and the specification of the present

application, only standard hardware components are illustrated, without essentially

changing the structure of the system (see page 2 of the specification, general-purpose

computer is used to perform the procedure). The components describe in these claims

are standard components of any personal computer. It is even reasonable to say that a

scientific calculator contains all the claimed components. The amendments of these

claims do not make the hardware patentably distinct from other standard computer.

Therefore, the examiner maintains the ground of rejection.

The examiner also suggests the applicant to review the PCT Written Opinion,

which indicates the present invention has no novelty, no inventive step, and no

industrial applicability. Even though the Written Opinion regards to the canceled claim

1-19, the pending claims are essentially the same (the applicant canceled the original

claims and resubmitted the same claims which are reordered as claims 20-38 prior to

the first Office Action). Therefore, the PCT Written Opinion still applies and serves as

important second opinion.

The applicants have not challenged any Official Notice taken by the examiner.

Therefore, the Official Notices are treated as admitted prior arts.

Claim Rejection – USC 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine,
manufacture, or composition of matter, or any new and useful improvement
thereof, may obtain a patent therefor, subject to the conditions and requirements
of this title.

Claim 20-34, 37, and 39 are rejected under 35 U.S.C. 101 because the claimed

invention lacks patentable utility. Independent claims 20 and 39 merely disclose a

procedure for calculating $B= K+M+L$. The result is different from what the claim intend

to calculate. Furthermore, the claim is merely a repackage of a simple summation

mathematical formula.

For a claimed invention to be statutory, the claimed invention must produce a

useful, tangible and concrete result. An invention which is eligible for patenting under 35

U.S.C 101, is in the "useful arts" when it is a machine, manufacture, process or

composition of matter, which produces a useful, concrete and tangible result. The

fundamental test for patent eligibility is thus to determine whether the claimed invention

produces a useful tangible and concrete result. See AT&T v. Excel Communications

Inc., 172 F.3d at 1358, 50 USPQ 2d at 1452 and State Street Bank & Trust Co. v.

Signature Financial Group, Inc., 149 F.3d at 1373, 47 USPQ 2d at 1601 (Fed. Cir.

1998). The test for practical application as applied by the examiner involves the

determination of the following factors.

> a) "useful" – The Supreme Court in Diamond v. Diehr requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will not that:
>
> i. utility need not be expressly recited in the claims, rather it may be inferred.
>
> ii. if the utility is not asserted in the written description, then it must be well established.
>
> b) "tangible" – Applying In re Warmerdam, 33 F.3d 1354, 31 UAPQ 2d 1754 Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than manipulation of an abstract idea and is, therefore, nonstatutory under 35 U.S.C 101. In Warmerdam, the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium, which enabled its functionality to be realized.
>
> c) "concrete" – Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

As per claim 20 and 39, the invention also fails the tangible test, since the claim

is merely a repackage of a simple summation mathematical formula. Applicant admits

that the present invention is "basically composed of a mathematical formula and of the

steps to solve it" (see specification page 2). In summary, these claims disclose loading

a number K and a number M into computer memory, and determine a number L through

an "implicit" yet undisclosed equation, and perform a mathematical combination of K, M,

and L according to a given yet undisclosed formula. From the claim language, one of

ordinary skill in the art would most likely think that the invention is describing a simple

mathematical combination of B = K+ M +L. All the steps merely describe a formula and the steps for solving the formula, and the claim language does not disclose how such solution of the formula is used in a practical application. It appears that the claims are pure manipulation of data on a computer system. The claim involves no more than manipulation of an abstract idea and is, therefore, nonstatutory under 35 U.S.C 101.

Since claims 21-34, and 37 depend on claim 20, claims 21-34, and 37 are also rejected under U.S.C. 101.

Furthermore, claims 20-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on Supreme Court precedent a method claim must (1) be tied to another statutory class of invention (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)). A method claim that fails to meet one of the above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. Here claims 20-34 fail to meet the above requirements since there is not a sufficient tie to another statutory class. . A method claim must have sufficient tie to a statutory subject matter. In the present claims as amended, there is still no sufficient tie, because the computer in the invention is merely used to calculate a formula. In business method applications, it is required that a computer automates transaction, extract information from database, or execute tasks for human other than doing simple calculation, in order to establish

sufficient tie. As discussed earlier, the present invention merely uses computer to

conduct simple combination calculation.

Examiner's decision on patentability is supported by the PCT International

Preliminary Report on Patentability. The written opinion indicates that claim 1-19 have

no novelty, no inventive step, and no industrial applicability. Examiner notes that claim

1-19 are exactly the same as claim 20-38. Therefore, the written opinion applies to

claim 20-38 as well. Applicant is advised to consider the opinion of the PCT

International Preliminary Report.

Claim Rejection – USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

Claim 20, 21, 23-31, 37 and 39is rejected under 35 U.S.C. 103(a) as being

unpatentable over UNA (UNA McCaffrey, Be wary of interest-only, Jun 27, 2002, Irish

Times, pg. 58), in view of Ronald (Ronald Field, Mysteries revealed in buying a home,

Oct 23, 1994, The Salt Lake Tribune, pg. F.4).

As per claim 20 and 37, UNA teaches a computer implemented method
calculation interests for entrustments of money (K) comprising the following steps:

loading a number representing quantities of money K into a memory block of a computer system, wherein money K indicates possible amounts of credit granted (see third paragraph of full text, the "capital balance owed" is the same as money K, because they both indicate the amounts of money granted to borrower);

loading a number representing an additional remuneration M into a memory block of said computer system, wherein said additional remuneration M indicates the requirements of the lender for granting the loan (see third paragraph of full text, "interest" is the same as M; applicant states that M is interest in specification on page 3);

performing a mathematical combination of the aforementioned quantity of money K, extra yield M, by using said computer system, wherein the combination is performed according to a given formula, in order to obtain a quantity of money B that, asked of the borrower, allows the lender to obtain an average return of (K+M) (see third paragraph of full text, "repayments are comprised of two different elements: part of the capital balance owed and part of the interest due on the remaining balance; from this teaching, one of ordinary skill in the art would know that the total repayment, which is the same as money B, is the sum of capital K and total interest M, or B=K+M).

determining by means of said computer system an interest for entrustments of said quantities of money K as a function of said quantities of money K, additional remuneration M and additional amount of money L, said processor determining said additional amount of money L through an implicit equation (The applicant does not explicitly point out how the interest is calculated or which function is used in the calculation. Therefore, the claim language is interpreted as merely calculating an interest for entrustment of a certain amount of money. The applicant admits in the specification that "Various methodologies for the calculation of interest rates are known" (see page 1 of the specification). Since the claim language does not describe a distinctive method of calculating interest, the present claims are not patentable over the admitted prior arts. The applicant also adds a step to recite determining the additional amount of money L through an implicit equation. The examiner points out that calling an equation implicit without disclosing the identity of the equation is not helpful. Under the current claim language, the equation can be any equation in the world, and it is not possible to determine whether this undefined equation or the use of such constructs an inventive step. As such, this added step does not provide any patentable weight).

Examiner notes however, UNA does not teach processing of an additional amount of money L indicative of the risk of loss borne by the lender; and mathematical combination of the aforementioned quantity of money K, extra yield M and amount of money L, in order to obtain a quantity of money B.

Ronald teaches processing of an additional amount of money L indicative of the risk of loss borne by the lender (see fourth paragraph of full text, "The finance

charge...including pre-paid interest and the charges payable by the borrower such as points, loan fees, origination fees, and application fees to name a few"; examiner interprets that the additional charges payable by the borrower, such as points, loan fees, origination fees, and application fees, are the same as additional amount of money L, because all these fees are designed to make profits for the lender and to average out the loss in the case of borrowers default).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include processing of an additional amount of money L indicative of the risk of loss borne by the lender. Furthermore, by referencing Ronald, one of ordinary skill in the art would have known to modify UNA's total repayment formula by adding the additional amount of money L to K and M, or B=K+M+L). One of ordinary skill in the art would have been motivated to modify the reference in order to protect lender from the risk of loan loss.

The examiner reminds the applicant that in light of the KSR rationales, combining prior art elements according to known methods to yield predictable results is sufficient to establish prima facie of obviousness. In this case, as admitted by the applicant, the method of calculating an interest for entrustment of quantities of money K as a function of quantities of money K and additional remuneration M was prior art. Ronald teaches lender needs to add additional financial charge, such as points, loan fee, application fee, origination fee, and etc., to ensure profitability. These financial charges are interpreted as additional amount of money L. Therefore, it would have been obvious to one of ordinary skill in the art to modify the known prior art to add the element of L to the known equation of calculating interest for the interest of ensuring lender's profitability. The math required for the medication was well within the knowledge of one of ordinary skill in the art, unless the applicants can prove otherwise by filing an affidavit under 37 C.F.R 1.132.

Claim 37 is rejected for the same reason as claim 20. Claim 37 is merely a computer readable medium version of claim 20. The examiner considers the invention describes in claim 20 as software per se. Storing executable software in a computer readable medium is well known and would be obvious to do.

As per claim 21, UNA teaches wherein the aforementioned combination carried out by said computer system is an addition of the quantity of money K with extra yield M and amount of money L (please refer to claim 20).

Claims 23-28 encompass steps embodiments for calculation of interests for entrustments of money that procedure steps are with no-technical or general technical meaning and serve merely procedure definitional purposes. Furthermore, the information described in these claims would not enable one of ordinary skill in the art to use the invention to come up with indented result without undue experiments.

As per claim 29, UNA does not explicitly teach wherein said additional amount of money L, is made explicit by said computer system through an analytical solution.

Ronald implies that additional amount of money L, is made explicit through an analytical solution (see fourth paragraph of full text; examiner interprets that the additional charges payable by the borrower, such as points, loan fees, origination fees, and application fees, are the same as additional amount of money L, because all these fees are designed to make profits for the lender and to average out the loss in the case of borrowers default; it is inherent that these fees are calculated through some sort of analytical solution).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include additional amount of money L, is made explicit through an analytical solution.

One of ordinary skill in the art would have been motivated to modify the reference in order to accurately calculate the appropriate additional amount of charge which protects lender from risk of loss yet keeps payment attractive enough to the borrower.

As per claim 30, UNA does not explicitly teach wherein said additional amount of money L, is made explicit by said computer system through numerical methods or with the aid of error functions.

Ronald implies additional amount of money L, is made explicit by said computer system through numerical methods or with the aid of error functions (see fourth paragraph of full text; examiner interprets that the additional charges payable by the borrower, such as points, loan fees, origination fees, and application fees, are the same as additional amount of money L, because all these fees are designed to make profits for the lender and to average out the loss in the case of borrowers default; it is inherent that these fees are calculated through some sort of numerical methods).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to additional amount of money L, is made explicit by said computer system through numerical methods or with the aid of error functions.

One of ordinary skill in the art would have been motivated to modify the reference in order to accurately calculate the appropriate additional amount of charge which protects lender from risk of loss yet keeps payment attractive enough to the borrower.

As per claim 31, UNA does not explicitly teach wherein the extra yield M and additional amount of money L are expressed by said computer system as a percentage of K, respectively extra interest rate $iM = M / K$ and additional interest rate $iL = L / K$.

Ronald teaches the extra yield M and additional amount of money L are expressed by said computer system as a percentage of K, respectively extra interest rate $iM = M / K$ and additional interest rate $iL = L / K$ (Ronald teaches the well known concept of APR, which calculates the relative costs of the loan as a percentage of loan amount or capital K; APR calculates the percentage of total cost, which include interest M and additional financial charge or fee L, to the capital, $APR = iM + iL$; since the interest rate must be disclosed to borrower by law, the additional interest rate $iL = L/K$ can be easily calculated by subtracting iM from APR; it is well known that APR is expressed as

a percentage of K, and therefore it would have been obvious that M and L are also expressed as a percentage of K).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include extra yield M and additional amount of money L are expressed by said computer system as a percentage of K, respectively extra interest rate iM = M / K and additional interest rate iL = L / K.

One of ordinary skill in the art would have been motivated to modify the reference in order to allow borrower to have a clear idea about the amount of financial charge.

As per claim 39, UNA teaches a procedure for the calculation of interests for entrustments of money (K) comprising the following steps:

memorization of quantities of money K indicative of the possible amounts of credit granted (see third paragraph of full text, the "capital balance owed" is the same as money K, because they both indicate the amounts of money granted to borrower);

memorization of an additional remuneration M indicative of the requirements of the lender for granting the loan (see third paragraph of full text, "interest" is the same as M; applicant states that M is interest in specification on page 3);

mathematical combination, according to a given formula, of the aforementioned quantity of money K, extra yield M and amount of money L, in order to obtain a quantity of money B that, asked of the borrower, allows the lender to obtain an average return of (K+M) (see third paragraph of full text, "repayments are comprised of two different elements: part of the capital balance owed and part of the interest due on the remaining balance; from this teaching, one of ordinary skill in the art would know that the total repayment, which is the same as money B, is the sum of capital K and total interest M, or B=K+M), and

determining an interest for entrustment of said quantities of money K as a function of said quantities of money K, additional remuneration M and additional amount of money L, wherein said additional amount of money L is determined through an implicit equation (The applicant does not explicitly point out how the interest is calculated or which function is used in the calculation. Therefore, the claim language is interpreted as merely calculating an interest for entrustment of a certain amount of money. The applicant admits in the specification that "Various methodologies for the calculation of interest rates are known" (see page 1 of the specification). Since the claim language does not describe a distinctive method of calculating interest, the present claims are not patentable over the admitted prior arts. The applicant also adds a step to recite determining the additional amount of money L through an implicit equation. The examiner points out that calling an equation implicit without disclosing the identity of the equation is not helpful. Under the current claim language, the equation can be any equation in the world, and it is not possible to determine whether

this undefined equation or the use of such constructs an inventive step. As such, this added step does not provide any patentable weight).

Examiner notes however, UNA does not teach processing of an additional amount of money L indicative of the risk of loss borne by the lender; and mathematical combination, according to a given formula, of the aforementioned quantity of money K, extra yield M and amount of money L, in order to obtain a quantity of money B.

Ronald teaches processing of an additional amount of money L indicative of the risk of loss borne by the lender (see fourth paragraph of full text, "The finance charge...including pre-paid interest and the charges payable by the borrower such as points, loan fees, origination fees, and application fees to name a few"; examiner interprets that the additional charges payable by the borrower, such as points, loan fees, origination fees, and application fees, are the same as additional amount of money L, because all these fees are designed to make profits for the lender and to average out the loss in the case of borrowers default).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include processing of an additional amount of money L indicative of the risk of loss borne by the lender. Furthermore, by referencing Ronald, one of ordinary skill in the art would have known to modify UNA's total repayment formula by adding the additional amount of money L to K and M, or B=K+M+L).
One of ordinary skill in the art would have been motivated to modify the reference in order to protect lender from the risk of loan loss.

Claim 22, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable

over UNA (UNA McCaffrey, Be wary of interest-only, Jun 27, 2002, Irish Times, pg. 58),

in view of Ronald (Ronald Field, Mysteries revealed in buying a home, Oct 23, 1994,

The Salt Lake Tribune, pg. F.4), and further in view of Official Notice.

As per claim 22, UNA teaches wherein said computer system carries out a multiplication of extra yield M and amount of money L by a term $(1 - \lambda)$ representing the eventual applicable taxes, before carrying out said addition.
Official Notice is taken that applying taxes into the calculation of interest and profit is old and well known in the art. Interest income is subject to taxation.
It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include extra yield M and amount of money L are each multiplied with a term $(1 - \lambda)$ representing the eventual applicable taxes, before

being added.

One of ordinary skill in the art would have been motivated to modify the reference in order to make calculation more precise in real world practice.

As per claim 32, UNA does not explicitly teach wherein said computer system determines said extra interest rate iM is given by performing the sum of risk-free rate iF plus a mark-up iM for the lender for accepting the increased variability of its future revenues.

Official Notice is taken that interest rate iM is given by the sum of prime rate and additional points agreed by both lender and borrower is old and well known in the finance art. The risk-free rate is interpret as the prime rate and the mark-up interest rate is interpret as the additional points.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include a computer system determines extra interest rate iM is given by the sum of risk-free rate iF plus a mark-up iM for the benefit of making profit to the lender and protecting lender from the risk of loan loss

As per claim 33, UNA does not explicitly teach wherein the procedure has a reiteration step for significative values of the input reiteration variables, including the amount of money K.

Official Notice is take that significating or indicating values of the input variable is old and well known in the computer art. Any scientific calculator, such as Texas Instrument's TI-83 or TI-89, can perform reiteration step and indicate values of the input variable.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include wherein the procedure has a reiteration step for significative values of the input reiteration variables, including the amount of money K.

One of ordinary skill in the art would have been motivated to modify the reference in order to allow user to see the input variables.

As per claim 34, UNA does not explicitly teach wherein the output of the reiteration step is stored in a vector or list in a memory block of said computer system, or plotted by said computer system on a graph that represents the total amount of money $B(K,M,L,\lambda)$ for any significant value of the reiterative variables.

Official Notice is taken that output of the reiteration step includes plotting the solution of a formula on a graph is old and well known in the computer art. Any scientific calculator or personal computer can calculate and graph the solution.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the reference to include wherein the output of the reiteration step is stored in a vector or list, or plotted on a graph that represents the total amount of money $B(K,M,L,\lambda)$ for any significant value of the reiterative variables.

One of ordinary skill in the art would have been motivated to modify the reference in order to present the solution and variables in an easy-to-understand format.

Claim 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schroeder et al. (Pub. No.: US 2003/0130883), in view of Texas Instruments (Texas

Instruments, TI-89 TI-92 Plus Guidebook for Advanced Mathematics), and further in

view of Ronald (Ronald Field, Mysteries revealed in buying a home, Oct 23, 1994, The

Salt Lake Tribune, pg. F.4).

As per claim 35 and 36, Examiner notes that the applicant merely claims some hardware components which are common place in any modern computer or scientific calculator. Examiner points out that the contribution of the present application apparently resides only in a computer-implementation of an administrative scheme that is, to define an administrative method for calculation of interests for entrustments of money and claims which specify commonplace features relating to the technological implementation of such method.

The procedure for calculating of interests is essentially implemented by general software programming. This is used to implement an administrative scheme, without changing the underling hardware/network. The administrative scheme is essentially implemented by software programming.

From the point of view of an ordinary skill in the art, the task of programming such a system/device is per se a normal and obvious aim and already forms part from the prior art.

It appears that the implementation of a method for calculation of interests for entrustments of money is a routine programming measure well within the reach of an ordinary skill in the art.

Examiner provides three prior arts as examples to demonstrate the existing computer-implementation of a business scheme, the hardware for performing calculation, and the method of calculating interest of loan. Specifically, Schroeder teaches an existing computer-implementation of a business scheme; Texas Instruments teaches an existing hardware for performing calculation, which include all the components claimed by the applicant; and Ronald teaches an existing method of calculating interest of loan.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the references to come up with all the features and limitations in claim 35 and 36.

One of ordinary skill in the art would have been motivated to modify the reference in order to leverage the computing power of existing hardware to perform a business scheme.

Since claims 35 and 36 are system claims, only the structure of the system carries patentable weight. Based on Fig 1 to Fig 3 and the specification of the present application, only standard hardware components are illustrated, without essentially changing the structure of the system (see page 2 of the specification, general-purpose computer is used to perform the procedure). The components describe in these claims are standard components of any personal computer. It is even reasonable to say that a scientific calculator contains all the claimed components. The amendments of these claims do not make the hardware patentably distinct from other standard computer. Therefore, the examiner maintains the ground of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO FU whose telephone number is (571)270-3441. The examiner can normally be reached on Mon-Fri/Mon-Thurs 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dixon can be reached on (571) 272-6803. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art Unit 3696   Examiner
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JULY-09

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